

CLAIMS:

1. A method for the selection (puncturing) of data bits from a data word in a data processing system, notably a communication system, wherein the data bit or data bits of the data word comprising n data bits are selected, within one cycle of operation of a working processor, on the basis of a selection bit register which contains n selection bits which
5 indicate whether a data bit of the data word is to be selected.

2. A method as claimed in claim 1, wherein the selected data bits are written into a buffer memory.

10 3. A method as claimed in claim 1 or 2, wherein the data bits selected within one cycle of operation are counted.

4. A method as claimed in claim 3, wherein the number of data bits written in the buffer memory is summed.

15 5. A method as claimed in one of the claims 2 to 4, wherein the data bits that are already present in the buffer memory which is constructed as a shift register are shifted through the number of new data bits prior to the writing of new data bits.

20 6. A method as claimed in one of the preceding claims, wherein the selected data bits, possibly already present in the buffer memory, are prepared so as to form an output data word, while utilizing a working bit register which contains m working bits and defines the output format, for output to a memory or the like.

25 7. A method as claimed in claim 6, wherein the output takes place in dependence on the number of data bits present in the buffer memory or after every cycle of operation of the working processor.

8. A method as claimed in claim 6 or 7, wherein a predetermined number of data bits is output from the buffer memory.

9. A method as claimed in one of the claims 6 to 8, wherein the data word read out from the buffer memory is extended by the addition of one or more further data bits.

10. A method as claimed in one of the claims 6 to 9, wherein the data word read out from the buffer memory is shifted within the output data word.

11. A device for carrying out the method claimed in one of the claims 1 to 10, including a working processor (2) and a data bit selection unit (1) for selecting one or more given data bits from a data word (4), comprising n data bits (10), on the basis of a selection bit register (6) which contains n selection bits (11) which indicate whether a data bit (10) of the data word (6) is to be selected, such selection taking place within one cycle of operation of the working processor (2).

12. A device as claimed in claim 11, characterized in that the selection bit register (6) can be loaded from a selection bit register memory (5) which comprises a plurality of selection bit registers (6) and is included in the data bit selection unit (1).

13. A device as claimed in claim 11 or 12, characterized in that there is provided a buffer memory (7) which is constructed as a shift register and in which the data bits (10) selected within one cycle of operation can be stored.

14. A device as claimed in one of the claims 11 to 13, characterized in that there is provided a counter for counting the data bits (10) selected within one cycle of operation and for summing the numbers of bits of a plurality of cycle of operation.

15. A device as claimed in claims 13 and 14, characterized in that data bits already present in the buffer memory (7) can be shifted in dependence on the number of new data bits (10) to be written.

16. A device as claimed in one of the claims 11 to 15, characterized in that there is provided at least one working bit register (8) which contains m working bits (14) and defines

the output format, said working bit register preparing data bits read out from the buffer memory (7) so as to be output in the form of an output data word (9).

17. A device as claimed in claim 16, characterized in that the working bit register (8) includes a first register section (I) which constitutes the counter.

18. A device as claimed in claim 16 or 17, characterized in that there is provided a second counter section (II) which defines the number of data bits (13) to be read out from the buffer memory (7).

19. A device as claimed in one of the claims 16 to 18, characterized in that there is provided a third register section (III) whereby the data bits (15) read out can be shifted within the output data word (9).

20. A device as claimed in one of the claims 16 to 19, characterized in that there are provided a fourth and a fifth register section (IV, V) which define how the output data word (9), consisting of m data bits (15), is to be completed when n data bits are read out from the buffer memory (7), where $n < m$.

21. A device as claimed in one of the claims 16 to 20, characterized in that there is provided a sixth register section (VI) whereby the output mode can be adjusted.

22. A device as claimed in claim 21, characterized in that a first bit is written or can be written into the sixth register section (VI) and a selection between a first output mode in which the updating of a pointer, that can be updated before or after reading out and indicates a memory location, is suppressed until the count of the counter is smaller than or equal to the defined number, and a second mode in which updating of the pointer is permitted, irrespective of the count, is made on the basis of the value of the bit written in the sixth register section (VI).

23. A device as claimed in one of the claims 11 to 22, characterized in that it forms part of a portable telecommunication device for mobile telecommunication.